Post-mortem examination (rodents): training programme

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Introduction

Post-mortem Examination (PME) is a critical procedure that allows for a thorough investigation into the cause of death, offering invaluable insights into underlying pathological conditions or disease processes. It is vital to perform a PME as soon as possible following a schedule 1 procedure, to ensure accurate findings. At the Sainsbury Wellcome Centre (SWC), Animal Technologists (ATs) often perform a PME on behalf of the research groups. To enhance this service, the Named Animal Care and Welfare Officers (NACWOs), in collaboration with the Named Veterinary Surgeon (NVS) obtained certification in performing PMEs. This process has provided NACWOs with a solid foundation in PME techniques. Since then the NACWOs have developed a training programme designed for all ATs. The training programme is structured around the training and competency framework utilised at the SWC.

Training programme

Training sessions completed post-probation

Individual training sessions with a designated PME mentor guided by a structured handout (Figure 1) outlining specific learning objectives to be achieved such as:

– What is a PME, why and when these examinations should take place?

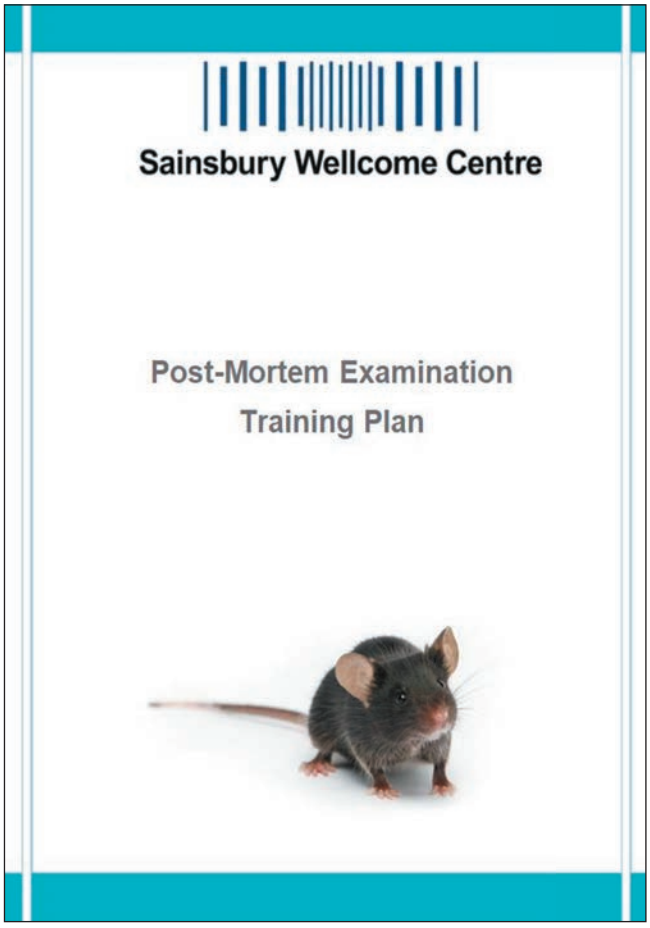

Figure 1. Handout used during PME training sessions.

- Correct PPE and equipment needed to perform a PME.
- Rodent anatomy, necropsy techniques, internal organ examination with identification and dissection of key organs (e.g. lungs, kidneys, brain).
- Sample collection.
- Common changes in the body after death.
- Identifying signs of disease, infection, trauma, or any other abnormalities.

ATs learn how to record findings on the PME report form (Figure 2) and store the form in a dedicated folder on SharePoint.

Mentoring sessions are recorded in an online form (JotForm) and submitted by a designated mentor once mentoring is completed.

ATs request to be observed by an in-house independent designated observer.

PME competency is recorded on PyRAT, SWC colony management system and re-observed every three years.

PME procedure

- PME is performed on animals suffering from ill health culled with Schedule 1 methods or on animals found dead.

Post-Mortem Examination Report Form

Date of PME:		**Animal Identification:**	**Cage number:**
Species:	**Sex:**	**Strain:**	**Date of Birth:**
Project Licence Holder Name:		**Number of animals in cage:**	**Personal Licensee Name:**
PPL and Protocol numbers:		**Approximate time after death PME performed:**	**Animal's bodyweight (g):**
Animal history including licensed procedures performed with dates, any genetic alterations, and details of surgical implants:			
External PME findings: Take photographs to compliment the abnormalities observed.			
Internal PME findings: Take photographs to compliment the abnormalities observed.			
Check list of organs: Heart: Lungs: Liver: Spleen: GI tract: Bladder: Kidneys: Pancreas: Reproductive tract: Brain		**Samples Collected:** Blood sample: ☐ Histopathology samples in formalin: ☐ List tissues: Faecal samples: ☐	
Any further comments:			
Initials:		**NVS comments:**	

Figure 2. Report form used to document findings of PME.

- The PME report form (Figure 2) is completed to document the findings.
- PME report form is sent to the PIL/PPL holder, group leader and the NVS.
- If a standard condition 18 is required, the PME report form is used to support it.
- When the NVS advises, collected samples are sent for off-site complementary analysis such as histology, microbiology or toxicology. The results of which together with the PME report form, provide the NVS with robust tools for an accurate assessment.

Outcomes

Enhancing Animal Welfare

- Refinement of experimental protocols.
- Aid the assessment of the effect of experimental processes.
- Discover phenotypic cause of ill health/death.
- Identify, predict and reduce trends of poor health.
- Check for disease outbreaks.

Improving ATs skills

- Hands on experience with PME.
- Identification of causes of death.
- Better understanding of experimental research.
- Record keeping and reporting.
- Establish trust with researchers and professional credibility within the establishment.
- Confidence boost.

Conclusion

The NVS's clinical expertise is vital in interpreting findings from the PME report forms. It helps ATs differentiate between normal anatomical variations and pathological changes for more accurate postmortem analysis. The collaboration between the NVS and ATs enhances the ATs' understanding of how postmortem findings can indicate conditions such as disease, infection, or trauma, ultimately improving their knowledge of veterinary medicine.

Acknowledgement

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